

## REMARKS

### Status of the claims:

Claims 21-38 currently stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yang, et al. (U.S. Patent No. 6,036,726). Claims 21 and 29 have been amended. Support for these amendments may be found in the written description and the examples as originally filed. Support for the amendments to claim 21 and 29 may be found on page 3, paragraph 28 of the published application.

### Rejections under 35 U.S.C. § 103

Claims 21-38 are rejected under 35 U.S.C. §103(a) as being unpatentable over Yang, et al. Applicants traverse.

The Examiner has asserted that Yang et al. teaches a successful dissolution process at a pressure of 250 psig and a temperature of 140-190 °C and that it would be *prima facie* obvious to one skilled in the art to choose the pressure and temperature claimed by Applicant. Example 12 of Yang et al., used by the Examiner in support of this rejection, presents the mere conclusory statement that the “dissolution process was successful with each of these post-consumer carpet samples.” Applicant submits that it is highly unlikely that Yang et al. achieved successful dissolution of post-consumer carpet samples at temperatures below 160 °C since the data presented in Example 11 teaches that dissolution was not achieved at any temperature below 160 °C.

Applicant has amended claims 21 and 29 to recite a pressure of at least 400 psig, which falls outside of the scope of the teachings of Yang et al. Applicant further submits that one skilled in the art would not expect nylon to dissolve in the alkanol at temperatures below 160 °C, as was demonstrated by Yang et al. The method developed by Applicant utilizes high pressures to accomplish the complete dissolution of the nylon at as little as 147 °C. It is a well known fact that an increase in pressure has a negligible effect on the solubility of either liquid or solid solutes in a solvent. Therefore, one of skill in the art would not have utilized a higher pressure for the purpose of dissolving a solid polymer within a solvent. Yang et al. reached this very conclusion and taught that increased temperatures facilitate more efficient dissolution without any regard to an increase in pressure. Furthermore, with respect to claim 38, Yang et al. does not

teach the dissolution at the increased pressure recited in the amended claims. Therefore, withdrawal of the rejection is warranted and respectfully requested.

### CONCLUSION

With the above amendments and remarks, Applicant believes that all objections and/or rejections have been obviated. Thus, each of the claims remaining in the application is in condition for immediate allowance. A passage of the instant invention to allowance is earnestly solicited.

Applicant believes that no fee is necessary, however, should a fee be deemed to be necessary, the Commissioner is hereby authorized to charge any fees required by this action or any future action to Deposit Account No. 16-1435.

Should the Examiner have any questions relating to the instant application, the Examiner is invited to telephone the undersigned at (336) 607-7442 to discuss any issues.

Respectfully submitted,

Date:

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